

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A ceramic heater comprising:

a ceramic substrate having a work-heating surface which is configured to directly face a work to be heated; and

a heating element disposed either on or in the ceramic ~~the surface or internally of the~~ substrate,

wherein the work-heating surface has a JIS B 0601 surface roughness of $R_{max} = 0.05$ to $200 \mu m$.

2. (Currently Amended) A ceramic heater comprising:

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a ceramic substrate having a work-heating surface which is configured to directly face a work to be heated; and

a heating element disposed either on or in the ceramic ~~the surface or internally of the~~ substrate,

wherein said ceramic substrate contains an element other than its dominant constituent elements and the work-heating surface ~~of the heater~~ has a JIS B 0601 surface roughness of $R_{max} = 0.2$ to $200 \mu m$.

3. (Previously Presented) The ceramic heater according to Claim 1

wherein said ceramic substrate is at least one member selected from the group consisting of a nitride ceramic, a carbide ceramic and an oxide ceramic.

4. (Currently Amended) A ceramic heater comprising:

a nitride ceramic substrate having a work-heating surface which is configured to directly face a work to be heated; and

a heating element disposed either on or in the nitride ceramic ~~the surface or internally of~~ said substrate,

wherein said nitride ceramic substrate contains an element other than its principal constituent elements and the work-heating surface ~~of the heater~~ has a JIS B 0601 surface roughness of $R_{\max} = 0.2$ to $200 \mu\text{m}$.

5. (Currently Amended) A ceramic heater comprising:

a nitride ceramic substrate having a work-heating surface which is configured to directly face a work to be heated; and

a heating element disposed either on or in the nitride ceramic ~~the surface or internally of~~ said substrate,

wherein said nitride ceramic ~~[[board]]~~ substrate contains at least one element selected from Na, B, Y, Li, Rb and Ca and ~~[[a]]~~ the work-heating surface has a JIS B 0601 roughness value of $R_{\max} = 0.2$ to $200 \mu\text{m}$.

6. (Canceled)

7. (Previously Presented) The ceramic heater according to Claim 4

wherein the content of at least one element selected from the group consisting of Y, Li, Rb and Ca is not less than 0.1 weight %.

8. (Previously Presented) The ceramic heater according to Claim 4

wherein the content of at least one element selected from the group consisting of Na and B is not less than 0.05 ppm.

9. (Previously Presented) The ceramic heater according to Claim 2,

wherein said ceramic substrate is at least one member selected from the group consisting of a nitride ceramic, a carbide ceramic and an oxide ceramic.

10. (Canceled)

11. (Previously Presented) The ceramic heater according to Claim 5

wherein the content of at least one element selected from the group consisting of Y, Li, Rb and Ca is not less than 0.1 weight %.

12. (Previously Presented) The ceramic heater according to Claim 5 wherein the content of at least one element selected from the group consisting of Na and B is not less than 0.05 ppm.

13. (Previously Presented) The ceramic heater according to Claim 1, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

14. (Previously Presented) The ceramic heater according to Claim 2, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

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15. (Previously Presented) The ceramic heater according to Claim 4, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

16. (Previously Presented) The ceramic heater according to Claim 5, wherein a semiconductor wafer is heated while being held by a supporting pin at a distance of 1 to 5000 μm apart from the work-heating surface of the ceramic heater.

17. (Previously Presented) The ceramic heater according to Claim 1, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

18. (Previously Presented) The ceramic heater according to Claim 2, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

19. (Previously Presented) The ceramic heater according to Claim 4, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

20. (Previously Presented) The ceramic heater according to Claim 5, wherein thermal conductivity of said ceramic substrate is 130 to 200 W/m·K.

21. (Previously Presented) The ceramic heater according to Claim 1, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

22. (Previously Presented) The ceramic heater according to Claim 2, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

23. (Previously Presented) The ceramic heater according to Claim 4, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

24. (Previously Presented) The ceramic heater according to Claim 5, wherein a thickness of said ceramic substrate is 0.5 to 5 mm.

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25-26. (Canceled)

27. (Previously Presented) The ceramic heater according to Claim 1, wherein the ceramic heater is a heater for heating a semiconductor wafer.

28. (Previously Presented) The ceramic heater according to Claim 2, wherein the ceramic heater is a heater for heating a semiconductor wafer.